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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,838	08/09/2000	Hendrik Fehlis	179-163P	3727
2292	7590	03/01/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			BHAT, ADITYA S	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/601,838

Applicant(s)

FEHLIS ET AL.

Examiner

Aditya S Bhat

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9, 12-15, 17 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 5-11 and 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 9, 12-15, 17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamir et al (USPN 6,438,508) in view of Tritchew et al. (USPN 5,897,223)

Tamir et al (USPN 6,438,508) teaches, a camera tracking system for a virtual television or video studio for determining the position and/or orientation of a recording camera, comprising: at least three emitter devices for emitting electromagnetic radiation the emitter devices being adapted to be mechanically coupled with the recording camera, (Col. 1, lines 62-64, Col. 2, lines 51-54), at least two detector devices for detecting the position of the emitter devices based upon the electromagnetic radiation emitted by the emitter devices, each detector device being adapted to detect plurality of emitter devices (Col. 1, lines 42-51), a computer unit for evaluating the electromagnetic radiation detected by the detector devices and emitted by the emitter devices and for determining the position and/or the orientation (Col. 5, lines 1-2) of the at least three emitter devices relative to the at least two detector devices (Col. 2, lines 51-54), and a gyroscope adapted to be coupled to the emitter devices and supplying measured values, the gyroscope being connected to the computer unit, the computer unit

processing the measured values from the gyroscope to correct the orientation of the emitter devices as determined on the basis of the detecting devices.

With respect to claim 2, Tamir et al (USPN 6,438,508) teaches emitter device for emitting electromagnetic radiation directed towards a detecting device or a reflector for reflecting electromagnetic waves (Col. 3, lines 48-50 & Col. 4, lines 5-6)

With respect to claim 3, Tamir et al (USPN 6,438,508) teaches a support member coupled to a camera (Col. 3, lines 25-28)

With respect to claim 4, Tamir et al (USPN 6,438,508) teaches emitter devices being arranged so that they radiate the electromagnetic radiation from a common side surface (Col. 3, lines 39-50)

With respect to claim 9, Tamir et al (USPN 6,438,508) emitting device emits electromagnetic radiation and has a planar surface from which it is reflected from (Col. 4, lines 5-6)

With respect to claim 12 Tamir et al (USPN 6,438,508) teaches the emitter devices comprise light sources particularly emitting light in the infrared range, and that the detecting devices are designed as detecting cameras for the light from these light sources. (Col. 1, lines 1-6)

With respect to claim 13 Tamir et al (USPN 6,438,508) teaches the emitter devices being located in the recesses of the support member (See figure 1).

With respect to claim 14 Tamir et al (USPN 6,438,508) teaches the covers diffusely radiate the light from the light sources. (Col.3, lines 47-50)

With respect to claim 15 Tamir et al (USPN 6,438,508) teaches the light sources are light emitting diodes, each emitter device being associated with plurality of light emitting diodes that may be switched individually, in groups or commonly (Col. 5, lines 55-58)

With respect to claim 17-18, Tamir et al (USPN 6,438,508) teaches the emitter device being distributed irregularly (Col. 1, lines 45-51)

With regards to claim 19, Tamir et al (USPN 6,438,508) teaches an emitter unit that fixedly attached to a camera, the emitter unit emitting electromagnetic radiation;(Col.2 lines 25-32)

a detector electromagnetic radiation in detected values that are based on position of detecting the order to provide the emitter unit; (Col.1, lines 42-51)

an orientation determination device, being fixedly attached to the camera, for supplying measured values; (Col.1, lines15-20) and

computer unit for receiving the detected values and measured values, the computer unit calculating position camera on the basis of the detected values and the measured values. (Col.6 lines 17-22)

With regards to claim 20, Tamir et al (USPN 6,438,508) teaches the measured values, which are supplied by the orientation determination device, are based on a pivot angle, a pitch angle, or a rolling angle of the camera. ;(Col.2 lines 49-56)

With regards to claim 21, the orientation determination device a gyroscope. (See below)

With regards to claim 22, Tamir et al (USPN 6,438,508) teaches detecting, by a detector unit, electromagnetic radiation that emitted by an emitter unit, the emitter unit being fixedly attached to the camera; ;(Col.2 lines 25-32)

providing detected values that based on the electromagnetic radiation detected by the detector unit; ;(Col.2 lines 25-32)

providing measured values that are provided by an orientation determination device, which fixedly attached to the camera; (Col.1 lines 15-20) (Col. 1,lines 40-51 ) and/

calculating a position and/or an orientation of the camera by computer unit on the basis the detected values and the measured values. providing measured values (Col.6, lines 18-23)

Tamir et al (USPN 6,438,508) does not appear to teach a gyroscope, however Tritchew et al. (USPN 5,897,223) teaches a stabilized platform system for a camera including a gyroscope. It would be obvious to one of ordinary skill in the art at the time of the invention to modify Tamir et al (USPN 6,438,508) to include the gyroscope taught by Tritchew et al. (USPN 5,897,223) in order to keep the camera stable (Col.1, lines 15-22).

### ***Claim Objections***

Claims 17-18 are objected to because of the following informalities: Claims 17 and 18 are duplicate claims that depend on the same independent claim. Appropriate correction is required.

Claims 5-11 and 16 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Drawings***

The drawings are objected to because figure 3 contains handwritten notations. Formal drawing will be required when the case is in condition for allowance.

### ***Response to Arguments***

During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

While the meanings of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

In this instance applicant argues that the prior art of record does not teach the claimed invention. The examiner respectfully traverses this assertion. Applicant argue that the Tritchew et al. reference does not teach a computer unit, and that the gyroscope is not utilized to supply measured values which pertain to the emitter devices, and that the Tritchew et al. reference maintains neutral static balance or the camera about a central pivot angle, the pitch angle and the rolling angle of the camera.

Tritchew et al. reference does however teach a processor (figure 7a) which is connected to sensors (60 figure 7a) in order to determine factors such as the pitch and roll rate. Also referring to the Tamir et al (USPN 6438508) reference (Col.6, lines 23-29) also teaches calculation by a processor of camera parameters such as pan tilt and roll. Therefore it is believed that the claimed invention reads upon the prior art of record and the previous rejection has been maintained. The application maybe in condition for allowance if the applicant were to amend the claims in order to clearly differentiate between the claimed invention and the prior art of record.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Steinberg et al. (USPUB 2001/0048483) teaches a method and apparatus for determining the position of a TV camera for use in a virtual studio, Tamir et al. (USPN 6,201,579, USUB 2001/0001242 & GB 2 323 733) teach a virtual studio position sensing system, Sharir (GB 2 324 429) teaches a electronic zoom control in a virtual studio, Klotz (GB 2 312 125) teaches a virtual studio with zoom control, Steinburg (GB 2 305 050) teaches determining the position of a TV camera for use in a virtual



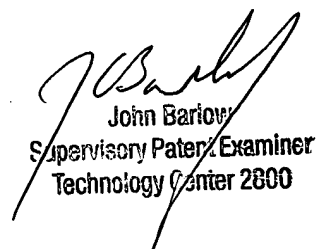
studio employing chroma keying, Tamir (GB 2 329 292) teaches a camera position sensing system, Russell (WO 98/54593) teaches position determination and De La Cierva (USPN 3,910,693) teaches a gyroscopic image motion compensator for a motion picture camera.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S Bhat whose telephone number is 571-272-2270. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aditya Bhat  
February 18, 2004

  
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